# Product Description Document
## Experimental Aviation Winter Weather Dashboard

## Part 1 – Mission Connection

**1. Product Description:**
The Experimental Aviation Winter Weather Dashboard depicts the potential winter weather impact to the Core 30 (minus Honolulu) airports. Updated four times per day, the web display shows the potential impact to each airport through a matrix of color coded boxes that depict nominal (green), slight (yellow), moderate (orange), and high (red) impact through eighty-seven forecast hours. The impact information is calculated using the Short-Range Ensemble Forecast (SREF) numerical weather prediction system.

**2. Purpose/Intended Use:**
The purpose of the dashboard is to provide a decision support for FAA air traffic managers and operational meteorologists to coordinate long range strategic winter weather planning by providing guidance on the impact from winter weather at major airports.

**3. Audience/Users:**
The intended audiences are operational meteorologists, local and national air traffic managers, and commercial airlines.

**4. Presentation Format:**
The dashboard is rendered via HTML in a web browser.

**5. Feedback Method:**
Feedback will typically be collected via comments provided to the AviationWeather.gov webmaster. Opportunities for face-to-face responses will occasionally occur in the context of media workshops, public outreach events, etc.

For further information please contact:
M. Pat Murphy
National Weather Service
Aviation Weather Center
7220 NW 101st Street Terrace
Kansas City, MO
Phone: 816.584.7239
Email: michael.pat.murphy@noaa.gov

## Part 2 – Technical Description

**1. Format and Science Basis:**
The dashboard renders the potential impact to each airport, at three-hourly forecast intervals, using data from the SREF. The probability of accumulated snowfall/ice pellets, accumulated freezing rain, and visibility are used to determine the particular impact category assigned to each

airport, every three forecast hours. The airports are split into four separate groups, ranked according to annual snowfall climatology, and each group has a specific probabilistic threshold for snowfall/ice pellets, freezing rain, and visibility that determine the category. For example, a probability of a high snowfall rate will have less impact at an airport that receives a large annual snowfall (such as Denver) versus an airport that receives little snowfall (such as Miami), so a "red" impact at Denver will translate to much higher winter weather precipitation than a "red" impact at Miami. The scientific algorithm that produces the impact category (nominal, slight, moderate, or high) uses probabilistic information derived from the SREF along with empirically created thresholds for each group of major airports.

**2. Training:**
No additional training is required to generate the product.

**3. Availability:**
The Experimental Aviation Winter Weather Dashboard is available 24/7 and updated 4 times a day, 03Z, 09Z, 15Z, and 21Z.

The Experimental Aviation Winter Weather Dashboard will be available at:
http://testbed.aviationweather.gov/winterdashboard

A current example of the Experimental Aviation Winter Weather Dashboard is available at:
http://testbed.aviationweather.gov/winterdashboard